

Notice of Allowability

Application No.

09/367,483

Examiner

Marc S. Zimmer

Applicant(s)

INAGAKI ET AL.

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to interview on 04/13/04.
2. ☒ The allowed claim(s) is/are 1 and 7-9.
3. ☒ The drawings filed on 4/30/04 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 04/04.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

JEFFREY B. ROBERTSON
PRIMARY EXAMINER
A.U. 1712

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with John Uren on 04/13/04.

The application has been amended as follows:

Listing of claims

Claim 1. [previously presented] A method for producing a flexible and low density cross-linking gel for connecting optical fibers having a refractive index, said method comprising: adjusting the refractive index of a flexible silicone gel material to be that generally equal to the refractive index of said optical fibers to be connected, and a reaction step for causing the flexible silicone gel material adjusted in said adjusting step by cross-linking said silicone gel material to an extent such that a gel having a low degree of cross-linking is produced for closely adhering to optical fibers; and wherein said adjusting step and said reaction step are carried out in a clean room.

Claim 2. [canceled]

Claim 3. [canceled]

Claim 4. [canceled]

Claim 5. [canceled]

Claim 6. [canceled]

Claim 7. [currently amended] A method for producing a low cross-linking density gel used for connecting and for adhering to optical fibers, said method comprising adjusting the refractive index of a flexible silicone gel material to that of said

Art Unit: 1712

optical fibers to be connected, synthesizing a composition by adding a cross-linking agent to said adjustable flexible silicone gel material; filling a syringe with said composition; sealing said syringe; and heating said sealed syringe to cause said composition to undergo an addition reaction [in a binding region where cross-linking density is low,] thereby producing a low cross-linking density gel in said syringe allowing close adherence to said optical fibers.

Claim 8. [previously presented] A method according to claim 7, wherein the syringe is sealed by mounting a cap in the sealing step.

Claim 9. [previously presented] A method according to claim 8, wherein the syringe is mounted in a dispenser for dispensing a predetermined amount of the low cross-linking-density gel by replacing the cap mounted on the syringe by a nozzle after the low cross-linking-density gel is produced in the syringe.

Claim 10. [canceled] A low cross-linking density gel used for connecting optical fibers, said gel being characterized in that it is produced by adjusting a flexible silicone gel material so that said material has a predetermined refractive index generally identical to that of the refractive index of said optical fibers to be connected and further subjecting said gel to an addition reaction with the addition of a cross-linking agent so that said gel will cross-link in a binding region where cross-linking density is low.

Claim 11. [canceled] A low cross-linking density gel according to claim 10, wherein the specified refractive index is set substantially equal to the refractive index of cores of optical fibers to be connected.

Claim 12. [canceled] A low cross-linking-density gel according to claim 10, wherein the flexible silicone gel material is a polyorganosiloxane having vinyl groups at its ends.

Claim 13. [canceled] A low cross-linking-density gel according to claim 10, wherein a cross-linking=agent is added prior to the cross-linking reaction and the addition reaction takes place in the presence of a platinum catalyst.

Art Unit: 1712

Claim 14. [canceled] A low cross-linking-density gel according to claim 13, wherein the cross-linking-agent is polyorganosiloxane having covalently bound hydrogen atoms.

Claim 15. [canceled] A low cross-linking density gel according to claim 13, wherein the composition after being filled in the syringe is caused to undergo the addition reaction by being heated during the cross-linking reaction.

Claim 16. [canceled] A low cross-linking-density gel according to claim 10, wherein the low cross-linking-density gel is produced in a clean room.

The above is merely a restatement of the claims set forth in Applicant's correspondence dated January 5, 2004 and February 17, 2004 but with the proper status designations.

Allowable Subject Matter

In the last Office action made final dated July 3, 2004, the Examiner had rejected all remaining active claims as being un-enabled by the original disclosure for the simple fact that it had not been made clear what the "adjusting" step entailed. Two possible interpretations were volunteered:

(i) the adjusting step entails crosslinking the silicone gel

or

(ii) adjusting is done "in advance" using the terminology of the Specification, i.e. the refractive index is controlled by judicious selection of an unvulcanized silicone having a number of aryl groups high enough to impart the desired level of refraction.

Art Unit: 1712

The Examiner no longer believes that claims 1 and 7 purport to adjust the refractive index by crosslinking. Therefore, the adjusting step will be narrowly construed as equivalent to a selection step wherein silicones are chosen based on their substitution patterns and the refractive index that is imparted by said substitution pattern. Applicant has made an earlier admission in their correspondence dated January 10, 2002 that this was, in fact, what had been contemplated by reciting an "adjusting" step. Accordingly, the rejection under 35 U.S.C. § 112, first paragraph has been withdrawn.

As for the patentability of these claims over the prior art, the Examiner explained that the art, if anything, taught away from the premise of preparing the gel in a clean room in the correspondence dated February 27, 2002. Regarding claims 7-9, although the prior art certainly discloses the preparation of organosilicon gels in a syringe, these references are not concerned with producing gels having a specified refractive index hence they too are allowable.

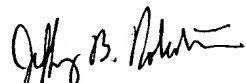
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc S. Zimmer whose telephone number is 571-272-1096. The examiner can normally be reached on Monday-Friday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

April 19, 2004


JEFFREY B. ROBERTSON
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